

Application No.: 10/037394

Case No.: 56059US009

Remarks

No new matter has been added by the amendment of claims 14 & 15 or by the entry of claims 40-49. These claims are supported throughout the specification such as by the claims as filed, p. 2, lines 30-31; p. 3, lines 5-15, and p. 14, lines 21-30.

Disposition of the Claims

The Applicant would like to bring to the attention of the Examiner that although the Examiner did in fact act on the pending claims, the Office Action Summary mistakenly indicated that claim 34 was pending and claim 24 was not pending.

Rejection under 35 U.S.C. § 103

Claims 14, 15, 23, 24, 26 and 27 are rejected under 35 U.S.C. § 103 as being unpatentable over Weber et al. (U.S. Patent 3,222,204) in view of Brice (U.S. Patent 2,732,398).

Claims 14, 15, 29, 30, 32 and 33 are rejected under 35 U.S.C. § 103 as being unpatentable over Belisle et al (U.S. Patent No. 4,725,494) in view of Weber et al. (U.S. Patent 3,222,204) and Brice (U.S. Patent 2,732,398).

Claims 14, 14, 35, 36, 38 and 39 are rejected under 35 U.S.C. § 103 as being unpatentable over Morris et al (U.S. Patent No. 6,204,971) in view of Weber et al. (U.S. Patent 3,222,204) and Brice (U.S. Patent 2,732,398).

Each of these rejections rely on the combination of Weber et al. and Brice et al. for the teaching of the claimed fluorocarbon surface treatment. The Applicant agrees with the Examiner that Weber et al. does not teach a fluorocarbon treatment that comprises a compound having a general formula as recited in instant claim 14 and 15. The Applicant acknowledges that at column 7, line 2, Weber et al. cites Brice et al, U.S. Patent No. 2,732,398.

U.S. Patent No. 2,732,398 teaches fluorocarbon sulfonic acids and derivatives thereof. At column 1, lines 25-29 the '398 patent states, "The novel perfluorinated compounds claimed herein have in common a fluorocarbon sulfonyl group wherein a saturated and stable fluorocarbon structure (consisting of 1 to 18 perfluorinated carbon atoms) is directly bonded to a hexavalent sulfur atom of a sulfonyl group."

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However, in taking a closer look at Brice et al., note that at column 4, beginning at line 15, this reference states that, "The higher acids of the present series, and their salts (particularly the potassium and sodium salts) and amides, in addition to having utility as intermediates for chemical syntheses, have notable utility as anionic surface active agents ("surfactants"). This surface active property is markedly developed when the molecule contains five or more carbon atoms, and is of particular value when there are seven or more carbon atoms in the molecule. The n-perfluorooctane compounds, which have a normal chain of eight perfluorinated carbon atoms $\text{CF}_3(\text{CF}_2)_7$, are of particular noteworthy value as surface active agents and as starting compounds for making surface active compounds. . . . The substantial fluorocarbon "tail" in these molecular is highly inert and stable and is both hydrophobic and oleophobic, . . ."

Further at column 7, beginning at line 65 it is stated that, "These higher perfluoro sulfonic acids and derivatives have surface active properties rendering them suitable (depending on the particular system) for use as surface tension reducing agents and as surface treating and coating agents that are absorbed on the substrate surface with the fluorocarbon tails projecting outwardly to provide and exposed inert fluorocarbon surface that is non-polar and is both oleophobic and hydrophobic."

The Applicant submits that one of ordinary skill in the art motivated to look to Brice et al. in light of the teachings of Weber et al. would conclude that only those fluorocarbon sulfonic acids and derivatives having a substantial fluorocarbon "tail" would be suitable for use as a surface treatment for optical elements to induce float and not those having 1 to 4 perfluorinated carbons atoms as presently claimed. Reconsideration is respectfully requested.

Respectfully submitted,

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Date

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